

SIMATIC S7-300, Control Unit FM 355 C, 4 channels, continuous, 4 AI+8 DI+4 AO incl. multi-language configuration package, Manual and Getting Started (de, de, fr, en fr, it) on CD-ROM



Figure similar

Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
• permissible range, lower limit (DC)	20.4 V
• permissible range, upper limit (DC)	28.8 V
Input current	
from load voltage L+ (without load), max.	310 mA; Typ. 260 mA
from backplane bus 5 V DC, max.	75 mA; typ. 50 mA
Power loss	
Power loss, typ.	6.5 W
Power loss, max.	7.8 W
Digital inputs	
Number of digital inputs	8
Input characteristic curve in accordance with IEC 61131, type 2	Yes
Input voltage	

• Rated value (DC)	24 V
• for signal "0"	-3 to +5V
• for signal "1"	13 to 30V
<b>Input current</b>	
• for signal "1", typ.	7 mA
<b>Cable length</b>	
• shielded, max.	1 000 m
• unshielded, max.	600 m
<b>Analog inputs</b>	
Number of analog inputs	4
permissible input voltage for voltage input (destruction limit), max.	30 V
permissible input current for current input (destruction limit), max.	40 mA
<b>Input ranges</b>	
• Voltage	Yes
• Current	Yes
• Thermocouple	Yes
• Resistance thermometer	Yes
<b>Input ranges (rated values), voltages</b>	
• 0 to +10 V	Yes
— Input resistance (0 to 10 V)	100 k $\Omega$
• -1.75 V to +11.75 V	Yes
— Input resistance (-1.75 V to +11.75 V)	100 k $\Omega$
• -80 mV to +80 mV	Yes
— Input resistance (-80 mV to +80 mV)	10 M $\Omega$
<b>Input ranges (rated values), currents</b>	
• 0 to 20 mA	Yes
— Input resistance (0 to 20 mA)	50 $\Omega$
• 0 to 23.5 mA	Yes
— Input resistance (0 to 23.5 mA)	50 k $\Omega$
• -3.5 mA to +23.5 mA	Yes
— Input resistance (-3.5 mA to +23.5 mA)	50 $\Omega$
• 4 mA to 20 mA	Yes
— Input resistance (4 mA to 20 mA)	50 k $\Omega$
<b>Input ranges (rated values), thermocouples</b>	
• Type B	Yes
— Input resistance (Type B)	10 M $\Omega$
• Type J	Yes
— Input resistance (type J)	10 M $\Omega$
• Type K	Yes
— Input resistance (Type K)	10 M $\Omega$

• Type R	Yes
— Input resistance (Type R)	10 M $\Omega$
• Type S	Yes
— Input resistance (Type S)	10 M $\Omega$
<b>Input ranges (rated values), resistance thermometer</b>	
• Pt 100	Yes
— Input resistance (Pt 100)	10 M $\Omega$
<b>Thermocouple (TC)</b>	
<b>Temperature compensation</b>	
— internal temperature compensation	Yes
— external temperature compensation with Pt100	Yes
<b>Characteristic linearization</b>	
• parameterizable	Yes
<b>Cable length</b>	
• shielded, max.	200 m; 50 m at 80 mV and thermocouples
<b>Analog outputs</b>	
Number of analog outputs	4
Voltage output, short-circuit protection	Yes
Voltage output, short-circuit current, max.	25 mA
Current output, no-load voltage, max.	18 V
<b>Output ranges, voltage</b>	
• 0 to 10 V	Yes
• -10 V to +10 V	Yes
<b>Output ranges, current</b>	
• 0 to 20 mA	Yes
• 4 mA to 20 mA	Yes
<b>Connection of actuators</b>	
• for voltage output two-wire connection	Yes
• for current output two-wire connection	Yes
<b>Load impedance (in rated range of output)</b>	
• with voltage outputs, min.	1 k $\Omega$
• with voltage outputs, capacitive load, max.	1 $\mu$ F
• with current outputs, max.	500 $\Omega$
• with current outputs, inductive load, max.	1 mH
<b>Cable length</b>	
• shielded, max.	200 m; 50 m at 80 mV and thermocouples
<b>Analog value generation for the inputs</b>	
<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	14 bit; 12 bit or 14 bit, parameterizable

## Analog value generation for the outputs

### Settling time

• for resistive load	0.1 ms
• for capacitive load	3.3 ms
• for inductive load	0.5 ms

## Encoder

### Connection of signal encoders

• for voltage measurement	Yes
• for current measurement as 4-wire transducer	Yes

### Connectable encoders

• 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA

## Errors/accuracies

### Operational error limit in overall temperature range

• Voltage, relative to input range, (+/-)	0.6 %; $\pm 0.6$ to $\pm 1\%$
• Current, relative to input range, (+/-)	0.6 %; $\pm 0.6$ to $\pm 1\%$
• Resistance thermometer, relative to input range, (+/-)	0.6 %; $\pm 0.6$ to $\pm 1\%$
• Voltage, relative to output range, (+/-)	0.5 %
• Current, relative to output range, (+/-)	0.6 %

### Basic error limit (operational limit at 25 °C)

• Voltage, relative to input range, (+/-)	0.4 %; 80 mV: $\pm 0.6$ %; 250 to 1 000 mV: $\pm 0.4$ %; 2.5 to 10 V: $\pm 0.6$ %; 3.2 to 20 mA: $\pm 0.5$ %
• Current, relative to input range, (+/-)	0.4 %; $\pm 0.4$ to $\pm 0.6$ %
• Resistance thermometer, relative to input range, (+/-)	0.4 %; $\pm 0.4$ to $\pm 0.6$ %
• Voltage, relative to output range, (+/-)	0.3 %
• Current, relative to output range, (+/-)	0.5 %

## Interrupts/diagnostics/status information

Substitute values connectable	Yes; Parameterizable
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## Integrated Functions

Counter	No
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### Control technology

• Number of closed-loop controllers	4
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## Potential separation

### Potential separation controller

• between the channels	No
• between the channels and backplane bus	Yes; Optocoupler

## Isolation

Isolation tested with	500 V DC
<b>Connection method</b>	
required front connector	2x 20-pin
<b>Dimensions</b>	
Width	80 mm
Height	125 mm
Depth	120 mm
<b>Weights</b>	
Weight, approx.	470 g
<b>last modified:</b>	06/09/2020